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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/805,811	03/13/2001	Saburo Uehara	A-392	2890
802	7590	01/12/2004	EXAMINER	
DELLETT AND WALTERS 310 S.W. FOURTH AVENUE SUITE 1101 PORTLAND, OR 97204			BARAN, MARY C	
			ART UNIT	PAPER NUMBER
			2857	

DATE MAILED: 01/12/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

09/805,811

Applicant(s)

UEHARA, SABURO

Examiner

Mary Kate B Baran

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 03 November 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-5 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,3 and 4 is/are rejected.
- 7) ☒ Claim(s) 2 and 5 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. §§ 119 and 120

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
- 1) ☒ Certified copies of the priority documents have been received.
  - 2) ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - 3) ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
- a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

### Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

## **DETAILED ACTION**

### ***Response to Amendment***

1. The action is responsive to the Amendment filed on 03 November 2003.

Claims 1-5 are pending.

2. The arguments and amendments filed on 03 November 2003 are sufficient to overcome the prior 35 U.S.C. 112 2<sup>nd</sup> paragraph rejections and prior objections to the specification.

### ***Claim Objections***

3. Claims 1 and 2 are objected to because of the following informalities:

(a) In claim 1 page 6 line 4, "comprising" should be – comprising: –.

(b) In claim 2 page 6 line 2, "comprising initial value" should be –  
comprising an initial value –.

Appropriate correction is required.

### ***Claim Rejections - 35 USC § 103***

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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Claims 1-5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ohara (U.S. Patent No. 5,978,573) in view of Hendricks et al. (U.S. Patent No. 4,785,235) (hereinafter Hendricks).

Referring to claim 1, Ohara discloses a semiconductor device testing apparatus that detects a threshold within a prescribed test range for a semiconductor device based on a binary search method (see Ohara, col. 13 lines 3-7), comprising an initial value setting unit for setting either an upper-limit value or a lower-limit value of said test range as a first value (see Ohara, col. 13 lines 16-26), and the other limit value as a second value (see Ohara, col. 13 lines 16-19), and a device measuring unit for taking measurements using the binary search method (see Ohara, col. 13 lines 3-7) on said semiconductor device with the said set first value and said set second value (see Ohara, col. 13 lines 35-46). Ohara does not teach a testing apparatus that detects a pass/fail threshold, and setting pass or fail values.

Hendricks teaches a circuit testing apparatus (see Hendricks, column 3 lines 28-32) that detects a pass/fail threshold (see Hendricks, column 5 lines 15-37), and setting pass or fail values (see Hendricks, column 4 lines 10-16).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Ohara to include the teachings of Hendricks because setting pass/fail values and detecting pass/fail thresholds would have allowed the skilled artisan to reduce the time needed to eliminate false results (see Hendricks, column 5 lines 35-37).

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Referring to claim 3, Ohara further discloses said prescribed value is equivalent to a measurement resolution (see Ohara, col. 16 lines 49-53 and Figures 28a-c).

Referring to claim 4, Ohara discloses a semiconductor device testing method for detecting a threshold within a prescribed test range for a semiconductor device based on a binary search method (see Ohara, col. 13 lines 3-7), comprising a first step of setting either an upper-limit value of a lower-limit value of said test range as a first value and the other limit value as a second value (see Ohara, col. 13 lines 16-26), a second step of setting a measurement position in accordance with the binary search method, using said first value and said second value (see Ohara, col. 13 lines 29-31), a third step of performing a prescribed measurement on said semiconductor device at said measurement position set in said second step (see Ohara, col. 13 lines 30-34), a fourth step of setting said first value equal to the measurement position set in said second step if the measurement result obtained in said third step is less than a threshold, or setting said second value equal to the measurement position set in said second step if said measurement result is greater than a threshold (see Ohara, col. 13 lines 35-43), and a fifth step of calculating a difference between said first value and said second value after a processing in said fourth step is completed (see Ohara, col. 13 lines 44-46), and giving a command to repeat the processing from said second step onward until this difference is equal to or less than a measurement resolution (see Ohara, col. 13 lines 43-47 and lines 26-29). Ohara

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does not teach a testing apparatus that detects a pass/fail threshold, and setting pass or fail values.

Hendricks teaches a circuit testing apparatus (see Hendricks, column 3 lines 28-32) that detects a pass/fail threshold (see Hendricks, column 5 lines 15-37) and setting pass or fail values (see Hendricks, column 4 lines 10-16).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Ohara to include the teachings of Hendricks because setting pass/fail values and detecting pass/fail thresholds would have allowed the skilled artisan to reduce the time needed to eliminate false results (see Hendricks, column 5 lines 35-37).

***Allowable Subject Matter***

5. Claims 2 and 5 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

6. The following is a statement of reasons for the indication of allowable subject matter:

Claims 2 and 5 recite limitations which state a semiconductor device testing apparatus having an initial value changing unit for changing at least one of said pass value and said fail value set by said initial value setting unit so that said test range is extended by an amount equivalent to a prescribed value, wherein said device measuring unit performs said measurement using said pass

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value and said fail value after the value has been changed by said initial value changing unit. And these limitations are not found in the prior art of record.

### ***Response to Arguments***

7. Applicant's arguments with respect to claims 1, 3 and 4 have been considered but are not persuasive.

Applicant argues that the application is directed to testing a semiconductor device and that neither Ohara nor Hendricks teach semiconductor testing. However this is not the case. Ohara does teach testing a value, from a semiconductor device, against a threshold (see Ohara, column 3 lines 63-65).

Applicant further argues that Ohara does not teach error detection; however, there is no mention of error detection in the claim language, and further, Applicant states that the invention itself skips the error processing steps (see Amendment, page 11 lines 5-7).

Applicant further argues that neither Ohara nor Hendricks teach that the claimed method reduces the number of tests to run; however this limitation is not specified in the claim language.

Applicant further argues that Ohara does not teach a measurement resolution, which is defined in the specification as the minimum value between set points (see page 11 lines 14-17). Ohara teaches selecting the smallest element area for mapping processing (see Ohara, column 16 lines 49-55). Therefore this limitation is met by the teachings of Ohara.

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***Conclusion***

8. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Mary Kate B Baran whose telephone number is (703) 305-4474. The examiner can normally be reached on Monday - Friday from 8:00 am to 5:00 pm.

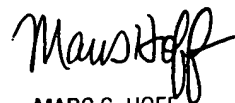
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Marc S Hoff can be reached on (703) 308-1677. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9318.



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Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-1782.

MKB



MARC S. HOFF  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 2800